

REMARKS

Upon entry of the Amendment, claims 1 and 3-7 are all the claims pending in the application.

Claim 2 has been canceled.

Claim 1 has been amended to incorporate the recitation of claim 2 and to correct typographical errors. No new matter has been added.

The specification has been amended to correct typographical errors. No new matter has been added.

The specification is objected to for containing minor grammar errors.

In response, Applicants have amended the specification and claim 1 to correct minor grammatical errors. Applicants respectfully request that the objection be withdrawn.

Claims 1-7 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3 and 6-15 of U.S. Patent No. 6,521,359 B1.

In response, Applicants have amended claim 1 by incorporating the recitations of claim 2, and have canceled claim 2. Independent claim 1 therefore does not cover the compound in formual (2) where X represents -NR₅-, -CO-, -COO-, or -SO₂-. In view of the amendment, the present claims are distinct and nonobvious in view of claims 1, 3 and 6-15 of U.S. Patent No. 6,521,359 B1. Therefore, the present claims do not present a double-patenting issue and it is respectfully requested that the rejection be reconsidered and withdrawn.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite.

In response and according to the Examiner's suggestion, Applicants have corrected the term "arylene" to "aryl" and inserted the term " Ar_1 " to clarify "each." In view of the amendment, the claims are clear and definite, and it is respectfully requested that the rejection be reconsidered and withdrawn.

Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Pei (US 2002/0193551 A1), and claims 1 and 3-7 are rejected under 35 U.S.C. § 103 as obvious over Pei.

In response, Applicants have amended claim 1 by incorporating the recitation of claim 2. Pei does not disclose the composition of Applicants' claims where, in formula (2), X represents -O-, -S-, or - SiR_3R_4 -. Pei does not anticipate the present claims, and it is respectfully requested that the rejection be reconsidered and withdrawn.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reisch et al. in *Macromol. Chem. Phys.* Vol. 200, No. 3 (1999), pp. 552-561 ("Reisch").

In response, Applicants respectfully traverse as follows.

In the case of Reisch polymers 11c and 11e, it is asserted that one of ordinary skill in the art would have reasonably expected that similar polymers having an alkyl substituent having 5 to 20 carbon atoms (as compared to the Reisch alkyl substituent having 4 carbon atoms) would possess properties similar to those possessed by Reisch polymers 11c and 11e. It is stated that this situation is governed by the rule that homologs are generally of sufficiently close structural similarity that there is a presumed expectation of similar products.

Applicants respectfully traverse, in that Reisch does not disclose a close structural homolog of the composition of amended claim 1. The structural homolog doctrine set forth in

the Action typically applies only to the situation where a claimed compound differs from the disclosed compound in one or more carbon atoms, usually in a chain. In view of the present amendment, the claims are not obvious in view of Reisch.

Moreover, any assertion of obviousness is clearly rebutted because one of ordinary skill in the art upon reading Reisch would be led away from the claimed invention. Reisch discloses that the di-substituted polymers 11a-e were synthesized to increase their solubility. Reisch states that the mono-substituted PPV possesses only a poor solubility. (See Reisch, page 552, lines 6-10 below Fig. 2). This was the motivation for Reisch's research into the disclosed the di-substituted polymers. On the contrary, Applicants' present invention exhibits visible fluorescence in the solid state *and* attains good solubility in even a mono-substituted polymer specifically having Ar₁. Thus, one of ordinary skill would not have thought to use Applicants' claimed compositions, because Reisch specifically teaches away from mono-substituted compounds.

One of ordinary skill in the art at the time of the invention would not have been motivated to make a polymer light emitting device using the polymers disclosed by Reisch, which teaches that a mono-substituted PPV possesses a poor solubility. Therefore, it is respectfully requested that the rejection be reconsidered and withdrawn.

Claims 1 and 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shi et al. (US 6,329,086 B1).

In response, Applicants have amended claim 1 by incorporating the recitation of claim 2. In view of the present claims, Applicants respond to this rejection in the same way as to the

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 09/928,348

rejection over Pei (US 2002/0193551 A1). Accordingly, Shi neither discloses nor suggests the invention of Applicants' claims.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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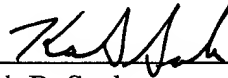
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Respectfully submitted,



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